

## Love That Dirty Water

Five field practices  
to improve sediment  
pond effectiveness



Jim Spotts

Anyone who has seen a sediment pond during a rainfall event knows just how Mother Nature really works. She does not follow all of the books, papers, discussions and opinions that explain how to make sediment ponds function properly. Only after careful observation of ponds during rainfall events will you discover five sensible practices that can make your sediment capture more effective.

### 1. Dry ponds versus wet ponds.

Ponds that are always filled with water cannot receive additional runoff until the current volume is reduced. If this current volume is too dirty to release, then the pond contains more water than it can handle. It is a good idea to minimize the volume of water in the pond to enable adequate storage capacity for the next runoff event.

**2. Provide an energy dissipater system immediately upstream of the**

**pond's entrance.** Slowing the inflow at this point will prevent the "fire-hose" effect for flow moving directly toward the outlet. The slower velocity will promote more particle settling.

**3. Provide baffles within the pond.** Any semi-porous obstacles will capture sediment before it reaches the outlet. The further up-pond you capture sediment, the easier it will be to remove it when required.

**4. Shoreline erosion.** Ponds always seem to have wind currents blowing across them. A wind velocity of 3 mph

across the surface will create a circulatory current that will keep silt and smaller-sized particles in suspension, preventing them from settling to the bottom. The same wind erodes soil at the water line, adding to the sediment already in suspension in the system.

**5. Discharge surface water only.** All of us have experienced problems with discharge systems. Keep in mind that the cleanest water is at the surface, so this is the water that should be discharged—not the water and sediment from the bottom. Gravel filters around perforated pipes quickly

clog, raising the water level in the pond. This is another problem. Any method you can use—such as a surface skimmer—that will remove only the surface water is highly desirable.

Based on field observations, you, too, can create effective measures to control the sediment in your sedi-

ment pond. Give these simple tips a try. You have nothing to lose and much to gain. [SWS]

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Mother Nature does not follow all of the opinions that explain how to make sediment ponds function properly, but careful observation of the ponds after rainfall can help you discover how to make your sediment capture more effective.